

GP 1646

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Kenneth A. Jones, et al.
U.S. Serial No. : 09/211,755
Filed : December 15, 1998
For : DNA ENCODING A GABA_BR2 POLYPEPTIDE AND
USES THEREOF



1185 Ave of the Americas
New York, New York 10036
April 26, 1999

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

APR 30 1999

GROUP 18

INFORMATION DISCLOSURE STATEMENT

In accordance with their duty of disclosure under 37 C.F.R. § 1.56 and § 1.97 (a)-(b), applicants would like to direct the Examiner's attention to the following disclosures which are listed on the attached Form PTO-1449 (**Exhibit 1**), including the following references attached hereto as **Exhibits 2-35**:

1. Clark, J.A., et al., "Functional Expression and Distribution of GB2, A Second GABA_B Receptor," *Society for Neuroscience Abstracts* (1998) **24**, Abstract 795.8 (**Exhibit 2**);
2. Grifa, A., et al., "GABA (γ-Amino-Butyric Acid) Neurotransmission: Identification and Fine Mapping of the Human GABA_B Receptor Gene," *Biochemical and Biophysical Research Communications* (1998) **250**: 240-245 (**Exhibit 3**);
3. Jones, K. A., et al., "GABA_B Receptors Function as a Heteromeric Assembly of the Subunits GABA_BR1 and GABA_BR2," *Nature* (1998) **396**: 674-679 (**Exhibit 4**);

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4. Jones, K. A., et al., "Cloning of GABA_BR2: Co-expression with GABA_BR1 Permits GIRK Activation in Oocytes and Mammalian Cells," *Society for Neuroscience Abstracts* (1998) **24**, Abstract 795.9 (**Exhibit 5**);
5. Jones, K.A., et al., "Evidence that GABA_B Receptors Function as Heteromers of GABA_BR1 and GABA_BR2," *4th International GABA_B Symposium* (1998) (**Exhibit 6**);
6. Kaupmann, K., et al., "Attempts to Characterize GABA-B Receptor Subtypes," *4th International GABA_B Symposium* (1998) (**Exhibit 7**);
7. Kaupmann, K., et al., "Human γ -Aminobutyric Acid Type B Receptors are Differentially Expressed and Regulate Inwardly Rectifying K⁺ Channels," *Proc. Natl. Acad. Sci. USA* (1998) **95**: 14991-14996 (**Exhibit 8**);
8. Kaupmann, K., et al., "GABA_B-Receptor Subtypes Assemble into Functional Heteromeric Complexes," *Nature* (1998) **396**: 683-687 (**Exhibit 9**);
9. Kuner, R., et al., "Role of Heteromer Formation in GABA_B Receptor Function," *Science* (1999) **283**: 74-77 (**Exhibit 10**);
10. White, J. H., et al., "Heterodimerization is Required for the Formation of a Functional GABA_B Receptor," *Nature* (1998) **396**: 679-682 (**Exhibit 11**);
11. Wise, A., et al., "Is There a Trafficking Factor for GABA_B Receptors," *4th International GABA_B Symposium* (1998) (**Exhibit 12**);

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12. GenEMBL Database Accession Number AL031983 (October 27, 1998) (**Exhibit 13**);
13. GenEMBL Database Accession Number AF109405 (January 7, 1999) (**Exhibit 14**);
14. GenEMBL Database Accession Number AF074483 (December 21, 1998) (**Exhibit 15**);
15. GenEMBL Database Accession Number AF074482 (December 21, 1998) (**Exhibit 16**);
16. GenEMBL Database Accession Number AJ011318 (December 15, 1998) (**Exhibit 17**);
17. GenEMBL Database Accession Number AJ225029 (November 17, 1998) (**Exhibit 18**);
18. GenEMBL Database Accession Number AJ225028 (November 16, 1998) (**Exhibit 19**);
19. GenEMBL Database Accession Number AF058795 (October 15, 1998) (**Exhibit 20**);
20. GenEMBL Database Accession Number AF095724 (October 8, 1998) (**Exhibit 21**);
21. GenEMBL Database Accession Number AF095723 (October 8, 1998) (**Exhibit 22**);
22. GenEMBL Database Accession Number AF056085 (October 8, 1998) (**Exhibit 23**);
23. GenEMBL Database Accession Number Y10370 (April 7, 1997) (**Exhibit 24**);

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24. GenEMBL Database Accession Number Y10369 (April 7, 1997) (**Exhibit 25**);
25. GenEMBL Database Accession Number Y11044 (September 4, 1997) (**Exhibit 26**);
26. GenEMBL Database Accession Number AJ012185 (October 19, 1998) (**Exhibit 27**);
27. GenEMBL Database Accession Number AJ012186 (October 19, 1998) (**Exhibit 28**);
28. GenEMBL Database Accession Number AJ 012188 (October 19, 1998) (**Exhibit 29**);
29. Tanaka, C., et al., "Desensitization of GABA_B Receptor Expressed in *Xenopus* Oocytes," *Pharmacology Communications* (1992) **2(1-2)**: 20-22 (**Exhibit 30**);
30. Bowery, N.G., "Metabotropic GABA_B receptors cloned at last," *Trends Pharmacol. Sci.* (1997) **18(4)**: 103 (**Exhibit 31**);
31. Kerr, D.I.B., et al., "GABA_B Receptors," *Pharmacol. Ther.* (1995) **67(2)**: 187-246 (**Exhibit 32**);
32. GenBank Database Accession Number Z43654 (September 21, 1995) (**Exhibit 33**);
33. GenBank Database Accession Number T07621 (June 30, 1993) (**Exhibit 34**);
34. Invitrogen Corporation, *Invitrogen Product Catalog 1996*. San Diego, California: Invitrogen Corp. and Oxformd & Drozda. 1996, page 26, 30, 31 and 36 (**Exhibit 35**);

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The aforementioned references 29-34 (**Exhibits 30-35**) were cited by the International Searching Authority in the International Search Report, issued February 10, 1999 in connection with PCT International Patent Application No. PCT/US98/22033. A copy of the International Search Report is attached hereto as **Exhibit 36**.

The following references which are listed on the attached Form PTO-1449 (Exhibit 1) were previously cited in connection with the prosecution of U.S. Serial Number 08/953,277 from which the subject application claims benefit under 35 U.S.C. §120. According to 37 C.F.R. §1.98(d), copies of patents or publications that were previously cited by, or submitted to, the Office in connection with such prior applications need not accompany the Information Disclosure Statement. Accordingly, copies of the following references are not attached to this Information Disclosure Statement:

1. PCT International Application No. WO 97/46675, published December 11, 1997, Kaupmann, K., et al.
2. Bittiger, H., et al., "GABA_B Receptor Antagonists: From Synthesis to Therapeutic Applications," *Trends Pharmacol. Sci.* (1993) **14**: 391-394.
3. Bonanno, G., et al., "Multiple GABA_B Receptors," *Trends Pharmacol. Sci.* (1993) **14**: 259-261.
4. Bowery, N. G., et al., "The Cloning of GABA_B Receptors," *Nature* (1997) **386**: 223-224.
5. Chapman, R. W., et al., "GABA_B Receptors in the Lung," *Trends Pharmacol. Sci.* (1993) **14**: 26-28.

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6. Giuliani, S., et al, "Effect of the GABA_B Antagonist, Phaclofen, On Baclofen-Induced Inhibition of Micturition Reflex in Urethane-Anesthetized Rats," *Neuroscience* (1992) **48(1)**: 217-223.
7. Kaupmann, K., et al., "Expression Cloning of GABA_B Receptors Uncovers Similarity to Metabotropic Glutamate Receptors," *Nature* (1997) **386**: 239-246.
8. Kaupmann, K., et al., "Structure, Pharmacology and Chromosomal Localization of GABA-B Receptors," *Society for Neuroscience Abstracts* (1997) **23**: 954, Abstract 379.1.
9. Malcangio, M., et al., "Possible Therapeutic Application of GABA_B Receptor Agonists and Antagonists," *Clinical Neuropharmacology* (1995) **18(4)**: 285-305.
10. Mondadori, C., et al., "CGP 36742: The First Orally Active GABA_B Blocker Improves the Cognitive Performance of Mice, Rats, and Rhesus Monkeys," *Behavioral and Neural Biology* (1993) **60**: 62-68.
11. Phelan, K. D., et al., "Characterization of Pre-Synaptic and Post-Synaptic GABA_B Receptors in Adult Human Neocortical Neurons Recorded in Vitro," *Society for Neuroscience Abstracts* (1997) **23**: 956, Abstract No. 379.16.
12. Teoh, H., et al., "GABA, Glutamate and Substance P-Like Immunoreactivity Release: Effects of Novel GABA_B Antagonists," *British Journal of Pharmacology* (1996) **118**: 1153-1160.
13. Expressed Sequence Tags Database Accession Number Z39716 (September 21, 1995).

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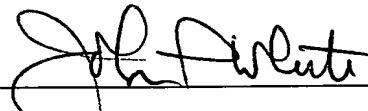
- 14 Expressed Sequence Tags Database Accession Number Z43654
(September 21, 1995).
15. Expressed Sequence Tags Database Accession Number H14151
(July 10, 1995).
16. Expressed Sequence Tags Database Accession Number R76139
(June 6, 1995).
17. Expressed Sequence Tags Database Accession Number T07621
(June 30, 1993).
18. Expressed Sequence Tags Database Accession Number R80448
(June 9, 1995).
19. Expressed Sequence Tags Database Accession Number AA324303
(April 20, 1997).

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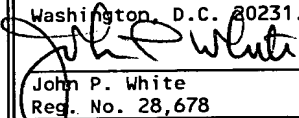
If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants undersigned attorneys invite the Examiner to telephone the number provided.

No fee is deemed necessary in connection with the filing of this Information Disclosure Statement. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.	
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